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TRAINING  
ANALYSIS  
AND  
EVALUATION  
GROUP

**TECHNICAL MEMORANDUM 83-4**

12

**EXECUTIVE SUMMARY**

**INSERVICE TRAINING NEEDS ASSESSMENT  
IN THE NAVEDTRACOM**

**JULY 1983**

**FOCUS ON THE TRAINED PERSON**

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EXECUTIVE SUMMARY  
INSERVICE TRAINING NEEDS ASSESSMENT  
IN THE NAVEDTRACOM

Eugene R. Hall  
Larry H. Ford

Training Analysis and Evaluation Group

July 1983

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*Alfred F. Smode*

ALFRED F. SMODE, Ph.D., Director  
Training Analysis and Evaluation Group

*W. L. Maloy*

W. L. MALOY, Ed.D.  
Principal Civilian Advisor  
on Education and Training

FOREWORD

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This report summarizes work performed by the Training Analysis and Evaluation Group (TAEG) to assess the inservice training (IST) needs of personnel assigned to training activities across the Naval Education and Training Command (NAVEDTRACOM).<sup>1</sup> It presents highlights of the study performed, including the essential purposes of the effort, the basic approaches employed, and analytical procedures used. The report also provides general conclusions and general recommendations concerning IST within the NAVEDTRACOM. In addition, information is provided concerning the jobs currently performed by specific types of training activity personnel. Finally, priorities for IST, and specific conclusions and recommendations are given separately for NAVEDTRACOM training activity:

- commanding officers, executive officers, and directors of training,
- department heads, school heads and instructor supervisors
- instructors, and,
- → Curriculum and Instruction Standards Office personnel.



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<sup>1</sup>Complete details of the needs assessment study are contained in two basic TAEG reports (references 1 and 2).

### BACKGROUND

The Chief of Naval Education and Training (CNET) and his functional commanders require that subordinate training activities regularly provide inservice training (IST) to assigned personnel. This training is considered essential for maintaining and enhancing the skills of local staffs. However, only limited guidance has been provided to the activities concerning the topics that should be covered by IST and the emphasis they should receive. Currently, IST is designed at the local level to meet needs at the specific activity. Systematic attempts to identify IST needs across the Naval Education and Training Command (NAVEDTRACOM) have been lacking. Information about command-wide IST needs is desired by CNET to determine if enduring and critical needs exist, and to plan for the acquisition of materials that can be used in local IST programs to enhance efficient and effective fulfillment of the NAVEDTRACOM's training mission.

The Training Analysis and Evaluation Group (TAEG) was tasked by CNET to (1) assess the IST needs of personnel assigned to CNET training activities and (2) develop prioritized listings of command-wide inservice needs. For purposes of this study, inservice training is defined as training given individuals after they have reported to their duty station. Normally, inservice training does not involve travel expenses since the training is given at the duty station. Consequently, individuals are readily available to the assigned activity for the performance of their normal job duties when required.

Four groups of training activity personnel were identified by TAEG as potential candidates for inservice training:

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- training executives (i.e., commanding officers, executive officers, and directors of training)
- training managers (i.e., training department heads, school/course heads and instructor supervisors)
- instructors
- Curriculum and Instruction Standards Office (CISO) personnel.

Personnel in all four groups were surveyed. Two TAEG reports contain complete details of the overall needs assessment study: (a) Technical Report 144 (reference 1), which documents IST needs for training executives and CISO personnel and (b) Technical Report 145 (reference 2), which provides this information for training managers and instructors. The remainder of this present report provides highlights of the overall study. It presents summary information about the procedures used to obtain and analyze data and provides general study conclusions and recommendations.

Specific information about jobs performed by training activity personnel and prioritized inservice training needs for the various job incumbents are also given. In addition, specific conclusions and recommendations for IST are provided separately for each personnel group.

### METHOD

Mail-out questionnaires were used to obtain data from training activity personnel. Separate questionnaires were developed for use with each of the four groups of activity personnel (i.e., training executives, training managers, instructors and CISO personnel). Each questionnaire had two sections in common: section I, which requested background information, and section II, which asked questions (and provided response fields) about specific job functions that a given group of personnel might perform at a

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training activity. For each specific job function listed on a questionnaire, six questions were asked:

- On the average, how often do you perform this function?
- How difficult is it for you to perform this function?
- When you first arrived at this activity, how difficult was it for you to perform this function?
- How important is the performance of this function to success at your job?
- Did you receive any formal inservice training in how to perform this function when you arrived at this activity?
- If not, how useful would inservice training in how to perform this function have been when you first arrived at this activity?

Responses to the frequency of performance questions were used in various statistical routines to determine, overall, the essential elements (functions) of the jobs that the various personnel groups actually perform at training activities. The frequency of performance information was also used to determine if there were meaningful subgroups within each category of training activity personnel (e.g., "Is there more than one kind of training manager?"). Differences in the frequency of performing specific functions indicate different types of jobs. In turn, differences in jobs might indicate different inservice training needs.

Information provided in response to the questions about difficulty of performance of functions, importance of performance, and usefulness of inservice training were combined with frequency of performance information to establish priorities for inservice training.

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Responses to the question about the inservice training received by an individual upon arrival at an activity were used to gauge the extent to which activities currently provide this training.

Questionnaires were distributed to personnel at 35 NAVEDTRACOM training activities. It was agreed among TAEG, CNET, and CNTECHTRA (notably training program coordinators) personnel that this sample adequately represented all CNET training activities. Cover letters transmitted with the questionnaires requested the activities to distribute the questionnaires to assigned personnel as follows:

- training executives - 100 percent
- CISO personnel - 100 percent
- training managers - 50 percent
- instructors - 10 percent

Table 1 shows the number of questionnaires mailed to activity personnel and the return statistics.

TABLE 1. QUESTIONNAIRE STATISTICS

Personnel Category	Number Mailed	Number Usable Returns	Percent Usable Returns
CISO	244	199	82
Training Executives	87	76	87
Instructors	775	627	81
Training Managers	517	441	85
Totals	1,623	1,343	83

A common strategy was followed in analyzing the questionnaire responses for each type of personnel:

1. Major function groups encompassing specific functions (tasks) that personnel of a given type (e.g., instructors) perform were identified. These major function groups consist of the tasks that are performed with similar frequency at NAVEDTRAQOM training activities by a given type of individual. They do not reflect everything that these individuals do at training activities. Rather, they indicate the kinds of specific functions that constitute major tasks for these different groups of personnel.

2. Personnel subgroups were established based on differences in the frequency of performance of specific functions. For example, analyses showed that there is a common core of functions that are regularly performed by training managers at the schoolhouses (i.e., major function groups as described above). However, further analyses showed that, based on how often they do specific tasks, training managers fall into three distinct categories: school heads, department heads, and instructor supervisors. Similarly, training executives do not all do the same things with the same frequency. While there is considerable overlap in the functions they perform, training executives have somewhat different specific jobs, as one would expect, depending on whether they are commanding officers (CO), executive officers (XO), or directors of training (DOT).

Given that they have different specific jobs, then their IST needs may also differ in highly specific ways as may the priorities for delivering this training. Thus, it was necessary to know the specific areas in which jobs differ within the overall personnel types.



3. Rank orders were established to reflect the relative:

- frequency with which a type of personnel (or subgroup within a personnel type) performs tasks within a major function group
- difficulty they perceive in performing these functions
- importance of performance of the functions to success on the job
- usefulness of inservice training for performance of specific functions.

These rank orders were derived from the responses to specific questionnaire inquiries (see page 3).

4. Priorities for IST were developed for the various groupings of training activity personnel. These priorities were established by use of a ranking algorithm (see reference 1) to combine frequency, difficulty, and importance of function performance with the perceived usefulness of inservice training.

5. Responses to the question about receiving inservice training upon arrival at the assigned activity were tabulated to assess the extent of IST currently given within the NAVEDTRACOM.

## GENERAL CONCLUSIONS AND RECOMMENDATIONS

General conclusions and recommendations stemming from this needs assessment study are presented in this section. Specific conclusions and recommendations about inservice training for the particular groups of training activity personnel surveyed are presented in a subsequent section, "Specific Study Results."

### GENERAL CONCLUSIONS

Conclusions reached about IST needs from this study apply equally well to the four personnel types surveyed regardless of functional commander and community (i.e., surface, subsurface) served. Separate statistical analyses failed to find significant differences as a function of these two variables. Thus, it is a general conclusion that the results of the survey conducted identify the current inservice training needs of personnel assigned to training activities across the NAVEDTRACOM. As such, the results provide a good foundation for developing training materials for command-wide use in meeting these needs.

It is also a general conclusion that inservice training is not provided uniformly across the NAVEDTRACOM. The extent of inservice varies greatly across training activities. Even where there are local IST programs, they most often address only some of the functions covered in this study. Overall, training executives indicated that they received the least inservice training (approximately 10 percent reported they had received IST). Instructors received the most. Approximately half of the instructors reported they had received IST for some job functions. Detailed information on current IST is given in references 1 and 2.

Current NAVEDTRACOM publications that deal with inservice training are quite vague concerning the content of that training. Although some flexibility in providing IST should be left to local activities, the diversity in current IST programs identified by this study indicates the need for higher echelons to specify some minimum coverage for IST and to support local efforts. In addition to meeting needs identified by this study, IST could also be used by higher echelons to introduce new or revised policy and procedures into the field.

#### **GENERAL RECOMMENDATIONS**

Because of the command-wide applicability of the findings of this study, it is recommended that any actions taken on the basis of these findings be undertaken jointly between the CNET and his functional commanders. Three basic recommendations are submitted for action:

1. Use the specific results of this study, presented in the next section, as a basis for developing or procuring core training materials that can be used, with or without modification, in local IST programs.

2. Consider centralized development of IST materials and programs. Since most training activities have common IST needs, centralized development is reasonable and can also be expected to be less costly than independent development at each training activity. Joint CNET/Functional Commander coordination and support for centralized development are desirable.

3. Rewrite instructions governing IST at training activities. These instructions should include consideration for:

- specifying a minimally acceptable level and content of IST

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- designating a single billet/position at each training activity (e.g., CIS officer or senior education specialist) to be responsible for ensuring the IST is accomplished
- designating central coordination points at the CNET and functional commander level to provide ongoing assistance to training activity IST efforts
- coordinating local IST programs with formal school training (e.g., IT school).

### SPECIFIC STUDY RESULTS

Further findings of this needs assessment study are presented in this section in four separate parts. Each part deals with a particular training activity personnel type as follows:

Part A: Training Executives

Part B: Training Managers

Part C: Instructors

Part D: CISO Personnel

Each part is identically formatted to provide, sequentially:

- information about the functions performed by an overall personnel group (type)
- information, as applicable, about functions performed by subgroups within a given personnel type
- rank order information about the frequency (F), difficulty (D) and importance (I) of performing functions and about the perceived usefulness (U) of inservice training for given functions
- priorities for inservice training (IST)
- conclusions and recommendations for IST concerning personnel groups/subgroups.

Recommendations made for IST for any particular type of training activity person are based on two fundamental assumptions:

- personnel are currently doing the correct things
- personnel will continue to perform functions reported as typical for their classifications.

Changes to the jobs that are currently being performed may well affect IST needs.

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**SPECIFIC RESULTS, CONCLUSIONS AND RECOMMENDATIONS**

**PART A: TRAINING EXECUTIVES**

## FUNCTIONS

Table A-1 presents the major groups of functions that training executives perform at training activities. The names of the function groups, appearing in capital letters, were chosen by TAEG as descriptive of the majority of the specific functions falling within a grouping. For IST development, the major function group names could be viewed as topics, the specific functions as subtopics.

Based on analyses of the frequency of performing major functions, commanding officers (CO), executive officers (XO) and Directors of Training (DOT) have somewhat different jobs. Table A-2 shows rank orders for frequency of performance for the different subgroups of training executives. It also shows rank orders for difficulty and importance of performance and for the perceived usefulness of inservice training. In table A-2, a "1" indicates "most" and a "4" indicates "least." Thus, for COs, Personal Counseling functions are performed most often. The remaining three sets of functions (Quality Assurance, Personnel Assessment and Management of Student Throughput) are performed with about the same frequency (ranks are tied) but less often than Personal Counseling. For DOTs, the most difficult functions to perform are in the Quality Assurance (QA) area. Performing these QA functions well is also considered to be most important for success on the job. Also, DOTs indicate that IST in these QA functions would be the most useful area of IST for them.

TABLE A-1. COMPONENTS OF THE MAJOR FUNCTION GROUPS FOR TRAINING EXECUTIVES

QUALITY ASSURANCE

Implement internal system of accountability for training quality  
Select criteria to monitor for training quality  
Determine corrective action if a criterion falls below desirable level  
Allocate funds internally for efficient achievement of training quality  
Plan for future support needs

PERSONNEL ASSESSMENT

Assess subject matter expertise of personnel  
Assess instructional ability of personnel  
Assess personnel ability to design curricula

MANAGEMENT OF STUDENT THROUGHPUT

Manage student pipeline  
Minimize delays in training for students arriving at activity  
Counsel students on academic matters

PERSONAL COUNSELING

Recognize drug/alcohol abuse and take appropriate action  
Counsel staff and students on personal matters



TABLE A-2. RANK ORDERS OF MAJOR FUNCTIONS BY PERSONNEL TYPE FOR TRAINING EXECUTIVES

	Personnel Type											
	Commanding Officers				Executive Officers				Directors of Training			
	F	D	I	U	F	D	I	U	F	D	I	U
Quality Assurance	3	2.5	1	1	3	3	2	2	3	1	1	1
Personnel Assessment	3	1	3	3.5	4	1	4	4	4	2	4	2
Management of Throughput	3	2.5	4	3.5	2	2	3	3	2	4	3	4
Personal Counseling	1	4	2	2	1	4	1	1	1	3	2	3

Key to columns:

F = Frequency of Performance  
D = Difficulty of Performance  
I = Importance of Performance  
U = Usefulness of IST

"1" indicates most  
"4" indicates least

### INSERVICE TRAINING PRIORITIES

Priorities for IST were established by applying a ranking algorithm to the F, D, I, and U rank orders (see reference 1). These priorities are shown in table A-3. A "1" indicates the highest priority, a "4" the lowest priority.

TABLE A-3. OVERALL PRIORITY OF FUNCTIONS FOR  
INSERVICE TRAINING FOR TRAINING EXECUTIVES

Function <sup>1</sup>	Type of Personnel		
	Commanding Officer	Executive Officer	Director of Training
Quality Assurance	1	2	1
Personnel Assessment	2	3	3
Management of Throughput	4	3	4
Personal Counseling	3	1	2

<sup>1</sup>See table A-1 for descriptions of the major function areas.

Note: In the cells, a "1" indicates the highest priority; a "4" indicates the lowest priority.

### TRAINING EXECUTIVE AREAS OF KNOWLEDGE

In addition to questions about performance of functions, training executives were also asked about their familiarity with 12 areas of knowledge. Specifically, they were asked how familiar they were with each area when they arrived at their current duty station, how important familiarity is, whether they received inservice in each area, and how useful inservice would have been.

The individual area of knowledge items for training executives were rank ordered separately for COs, XO's, and DOTs. The rank orders were then

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used to indicate inservice training priorities. Three questions, concerning the degree of familiarity with the areas of knowledge, the importance of familiarity, and the usefulness of IST in the areas, were used to establish the rank orders. The IST priorities for COs, XO's and DOTs are shown in table A-4.

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TABLE A-4. PRIORITIES FOR IST IN AREAS OF KNOWLEDGE FOR TRAINING EXECUTIVES

	TYPE OF TRAINING EXECUTIVE		
	CO	XO	DOT
a. Principles and practices of Instructional Systems Design (ISD)	2	4	1
b. Subject matter taught at activity	3	4	2
c. Organization of the Training Command	2	4	1
d. Civil Service rules and regulations, including the merit pay system	2	2	1
e. The UCMJ at shore activities	2	4	4
f. Reporting systems, including NITRAS, MILPERSIS, SHOROCs and SHORSTAMPS	1	1	2
g. Special terminology used in training	4	4	3
h. Manpower planning for training activities	1	2	1
i. Administrative discharge procedures	3	4	4
j. PPBS - the Planning, Programming, and Budgeting System	1	3	3
k. How curriculum is approved	1	4	1
l. CNET training equipment support	1	4	1

Key to columns:

CO = Commanding Officer

XO = Executive Officer

DOT = Director of Training

"1" indicates "highest"

### CONCLUSIONS

There are three distinct types of training executives who have somewhat different IST priorities. These differences reflect the differing natures of their jobs.

All training executives should have IST in Quality Assurance functions as a first priority. Personal Counseling and Personnel Assessment also seem to be likely candidates for inservice. Management of Student Throughput can at least be given reduced emphasis and it may require no IST at all. All training executives would benefit from some introduction to the various reporting systems and to manpower planning. Some introduction to principles of training and to the training command itself is also indicated.

### RECOMMENDATIONS

1. Provide IST in the following to all Training Executives:
  - Quality Assurance functions listed in table A-1
  - Reporting Systems
  - Manpower Planning
2. For COs, provide additional IST in the following:
  - Personnel Assessment (table A-1)
  - Personal Counseling (table A-1)
  - PPBS
  - Curriculum approval
  - CNET training equipment support
3. For XO's, provide additional IST in the following:
  - Personal Counseling (table A-1)
  - Personnel Assessment (table A-1)
  - Management of Throughput (table A-1)

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- Civil Service Rules and Regulations
  - PPBS
  - Principles and Practices of ISD
  - The UCMJ at Shore Activities
  - Curriculum Approval
  - CNET Training Equipment Support
4. For DOTs, provide additional IST in the following:
- Personal Counseling (table A-1)
  - Personnel Assessment (table A-1)
  - Principles and Practices of ISD
  - Organization of the Training Command
  - Curriculum Approval
  - CNET Training Equipment Support
  - Subject Matter Taught at Activity
  - Civil Service Rules and Regulations
5. Send prospective commanding and executive officers to the Prospective Commanding Officer Shore Station Management Course offered by the Naval Civilian Personnel Command. This course addresses many topics relevant to the jobs of NAVEDTRACOM training executives. Of 13 training executives who attended this course, 12 recommended it.

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**SPECIFIC RESULTS, CONCLUSIONS AND RECOMMENDATIONS**

**PART B: TRAINING MANAGERS**

## **FUNCTIONS**

Table 3-1 presents the major groups of functions that training managers perform at training activities. The names of the function groups, appearing in capital letters, were chosen by TAEG as descriptive of the majority of the specific functions falling within a grouping. For IST development, the major function group names could be viewed as topics, the specific functions as subtopics.

Each training manager was asked to designate on his questionnaire which of three possible positions (school head, department head, instructor supervisor) he occupied at the training activity. Statistical analyses indicated that training managers' jobs differ significantly depending on the specific position they occupy. Table B-2 shows rank orders for the frequency (F) of performing functions for the three training manager subgroups. The table also shows how the functions were ranked for difficulty (D), importance (I) and usefulness (U) of inservice training. In table B-2, a "1" indicates "most" and a "7" indicates "least."

## **INSERVICE TRAINING PRIORITIES**

Inservice training priorities were developed separately for each subgroup of training managers by applying a ranking algorithm (see reference 1) to the F, D, I, and U ratings. These IST priorities are shown in table B-3. In the table, a "1" indicates the highest priority, a "7" indicates the lowest priority.



TABLE B-1. COMPONENTS OF THE MAJOR FUNCTION  
AREAS FOR TRAINING MANAGERS

ACADEMIC COUNSELING AND MONITORING

1. Evaluate student performance  
Distinguish between academic and nonacademic problems  
Identify academic counseling situation as either informal, formal  
or group  
Identify counseling technique appropriate to problem and student  
Apply academic counseling technique identified  
Follow up to ensure problem solution
2. Prepare/file counseling reports and records  
Convene and conduct academic review boards

ASSURING QUALITY OF INSTRUCTION/INTERNAL EVALUATION

1. Maintain the quality of the curricula and instruction  
Observe classroom instruction and training exercises periodically  
Provide continuous evaluation of training standards and performance  
Train instructors on teaching methods and techniques  
Evaluate progress of students and staff  
Conduct internal evaluations  
Manage/coordinate the conduct of instruction
2. Review class critiques for possible instructional improvements

PLANS FOR ACQUISITION/CONDUCT OF INSTRUCTION

1. Compute requirements for a course, including manpower, housing,  
equipment, and facilities  
Develop curriculum documentation  
Validate instructional materials  
Use Navy training plans for course planning  
Manage Technical Training Equipment (TTE) support
2. Use MIL-STD 1379B "Training Operations and Training Data," to  
evaluate formats of contractor developed training packages

ADMINISTRATIVE REVIEW

1. Implement management analysis techniques to resolve problems in  
schoolhouse  
Conduct management review  
Maintain staff qualifications
2. Review and evaluate staff utilization  
Ensure that training and attrition records are maintained  
Draft and submit administrative reports

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TABLE B-1. COMPONENTS OF THE MAJOR FUNCTION  
AREAS FOR TRAINING MANAGERS (continued)

MANAGING CURRICULUM DEVELOPMENT

1. Manage/coordinate the curriculum development process  
Develop plan to develop/revise curriculum
2. Plan training program  
Administer training program

EXTERNAL EVALUATION

Provide information to external evaluation system  
Use information from external evaluation system

INSERVICE TRAINING

Conduct inservice training  
Train staff (PQS and inservice)

TABLE B-2. RANK ORDERS OF FUNCTIONS BY POSITION DESCRIPTION FOR TRAINING MANAGERS

	Position Description																							
	Instructor Supervisor							School Head							Department Head									
	F			D			I			U			F			D			I			U		
	F	D	I	U	F	D	I	U	F	D	I	U	F	D	I	U	F	D	I	U				
Academic Counseling and Monitoring	1	7	2	3	1	7	4	4	3	7	4	3	7	4	7									
Assuring Quality of Instruction/ Internal Evaluation	2	6	1	1	3	3	1	1	1	6	1	1	6	1	2									
Plans for Acquisition/Conduct of Instruction	7	1	7	5	7	4	7	5	7	1	6	7	1	6	4									
Administrative Review	3	5	3	4	2	6	2	3	2	4	3	2	4	3	3									
Managing Curriculum Development	4	2	4	2	4	1	3	2	4	2	2	4	2	2	1									
External Evaluation	6	3.5	6	6	6	2	6	7	6	3	7	6	3	7	5									
Inservice Training	5	3.5	5	7	5	5	5	6	5	5	5	6	5	5	6									

Key to columns:

F = Frequency of Performance  
D = Difficulty of Performance  
I = Importance of Performance  
U = Usefulness of IST

"1" indicates most  
"7" indicates least

TABLE B-3. PRIORITY OF FUNCTIONS FOR INSERVICE TRAINING FOR TRAINING MANAGERS

Function <sup>1</sup>	Position Description		
	Instructor Supervisor	School Head	Department Head
Academic Counseling and Monitoring	4	5	7
Assuring Quality of Instruction/ Internal Evaluation	1	1	2
Plans for Acquisition/Conduct of Instruction	3	6	3
Administrative Review	5	3	4
Managing Curriculum Development	2	2	1
External Evaluation	7	4	5
Inservice Training	6	7	6

<sup>1</sup>See table B-1 for descriptions of the major function areas.  
Note: In the cells, a "1" indicates the highest priority; a "7" indicates the lowest priority.

### CONCLUSIONS

There are three distinct subgroups of training managers at NAVEDTRACOM activities. Each subgroup has somewhat different IST needs. All training managers report a high need for inservice in assuring quality of instruction/internal evaluation and in managing curriculum development. Also, all training managers report a moderate need for IST in administrative review. The relative priorities of other topics for IST depend on the type of training manager and can be determined from table B-3.

### RECOMMENDATIONS

1. For all training managers, provide IST in the following functions (see table B-1):
  - Assuring Quality of Instruction/Internal Evaluation
  - Managing Curriculum Development
2. For Instructor Supervisors, provide additional IST in the following:
  - Plans for Acquisition/Conduct of Instruction
  - Academic Counseling and Monitoring
3. For School Heads, provide additional IST in the following:
  - Administrative Review
  - External Evaluation
4. For Department Heads, provide additional IST in the following:
  - Plans for Acquisition/Conduct of Instruction
  - Administrative Review

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**SPECIFIC RESULTS, CONCLUSIONS AND RECOMMENDATIONS**

**PART C: INSTRUCTORS**

## FUNCTIONS

Table C-1 presents the major groups of functions that instructors perform at training activities. The names of the function groups, appearing in capital letters, were chosen by TAEG as descriptive of the majority of the specific functions falling within a grouping. For IST development, the major function group names could be viewed as topics, the specific functions as subtopics.

Statistical analyses performed on the frequencies of performance of functions disclosed four distinct subgroups of instructors. Depending on the method of instruction with which they are primarily involved, these subgroups perform several major functions with different frequencies. The four instructor subgroups identified are:

- group-paced without computer based instruction
- self-paced without computer based instruction
- group-paced with computer based instruction
- self-paced with computer based instruction.

Table C-2 shows rank orders for frequency (F) of performance of functions for the different subgroups of instructors. It also shows rank orders for difficulty (D) and importance (I) of performance and for the perceived usefulness (U) of inservice training. In table C-2, a "1" indicates "most" and a "7" indicates "least." The table is read thus: For those instructors who teach in a self-paced environment with CBI, academic counseling and monitoring functions are the most frequently performed. They are also the most important group of functions for success on the job, and inservice training is perceived as most useful for these functions. For the same subgroup of instructors, the most difficult functions to perform are

TABLE C-1. COMPONENTS OF THE MAJOR FUNCTION  
AREAS FOR INSTRUCTORS

ACADEMIC COUNSELING AND MONITORING

1. Evaluate student performance  
Distinguish between academic and nonacademic problems  
Identify academic counseling situation as either informal, formal  
or group  
Identify counseling technique appropriate to problem and student  
Apply academic counseling technique identified  
Follow up to ensure problem solution  
Prepare/file counseling reports and records
2. Deal with students from culturally different backgrounds

CURRICULUM DEVELOPMENT

1. Select instructional setting  
Develop objectives  
Develop tests  
Determine sequence of learning objectives  
Specify learning events/activities  
Review/select existing materials  
Develop instruction
2. Analyze existing courses  
Conduct operational validation of instructional system

COMPUTER BASED INSTRUCTION

1. Develop computer managed instruction documents  
Operate classroom clusters (Terminet and Opscan)  
Interact with computer system through classroom equipment  
Interact with computer system through batch equipment
2. Monitor use of CMI equipment  
Perform authorized maintenance on CMI system equipment

IDENTIFYING TASK ELEMENTS

1. Conduct job task analysis  
Select task functions  
Construct job performance measures
2. Provide items for external evaluation



TABLE C-1. COMPONENTS OF THE MAJOR FUNCTION AREAS  
FOR INSTRUCTORS (continued)

PRESENTATION/DELIVERY OF INSTRUCTION

1. Prepare self to present instruction  
Apply principles of learning theory
2. Present elements required by lesson plan/learning guide  
Monitor student progress during presentation of group-paced instruction

INDIVIDUALIZED INSTRUCTION

1. Monitor students in an individualized environment  
Provide for individual differences in learning rates/styles/abilities  
Interact with students to achieve a positive learning environment
2. Enter students into instructional system

PREPARATION OF EXTERNAL MATTERS

Prepare training areas  
Prepare instructional materials  
Perform operational checks on training aids and/or training equipment

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those concerned with curriculum development. However, curriculum development is also the least often performed.

#### **INSERVICE TRAINING PRIORITIES**

Priorities for IST were established separately for each subgroup of instructors by applying a ranking algorithm (see reference 1) to the F, D, I, U rank-orders. The resulting priorities are shown in table C-3. A "1" indicates the highest priority, a "7" the lowest priority.

TABLE C-2. RANK ORDERS OF FUNCTIONS BY PRIMARY METHOD OF INSTRUCTION FOR INSTRUCTORS

	Primary Method of Instruction													
	Group-paced Without CBI				Self-paced Without CBI				Group-paced With CBI				Self-paced With CBI	
	F	I	U	D	F	I	U	D	F	I	U	D	F	I
Academic Counseling and Monitoring	4	4	3	3	2	3	4	4	1	4	3	4	1	4
Curriculum Development	5	3	5	4	6	2	6	3	5	1	5	3	7	1
Computer Based Instruction	7	1	7	7	7	1	7	7	7	3	7	7	5	7
Identifying Task Elements	6	2	6	6	5	7	5	2	6	2	6	6	2	4
Presentation/Delivery of Instruction	1	7	1	1	3	5	1	4	1	7	1	2	3	5
Individualized Instruction	3	6	4	5	1	6	3	5	3	5	4	5	2	6
Preparation of External Matters	2	5	2	2	4	4	2	6	2	6	2	1	4	5

Key to columns:

F = Frequency of Performance  
D = Difficulty of Performance  
I = Importance of Performance  
U = Usefulness of Instruction

"1" indicates most  
"7" indicates least

TABLE C-3. OVERALL PRIORITY OF FUNCTIONS FOR INSERVICE TRAINING FOR INSTRUCTORS

Function <sup>1</sup>	Primary Method of Instruction			
	Group-Paced Without CBI	Self-Paced Without CBI	Group-Paced With CBI	Self-Paced With CBI
Academic Counseling and Monitoring	3	1	4	1
Curriculum Development	5	3	3	3
Computer Based Instruction	4	5	7	7
Identifying Task Elements	6	6	5	5
Presentation/Delivery of Instruction	1	2	2	4
Individualized Instruction	7	7	6	2
Preparation of External Matters	2	4	1	6

<sup>1</sup>See table C-1 for descriptions of the major function areas.  
Note: In the cells, a "1" indicates the highest priority; a "7" indicates the lowest priority.

### CONCLUSIONS

There are four distinct types of instructors within NAVEDTRACOM training activities. The distinguishing characteristic among these types of instructors is the method of instruction with which they are primarily involved. All four types of instructors report a moderate need for IST in curriculum development. Any IST program for any type of instructor should include this topic and should give it some emphasis. Other topics for IST have differing priorities depending on the type of instructor (see table C-3). Group-paced instructors report a need for IST in the preparation of external matters (see table C-1). Self-paced instructors report a need for IST in academic counseling and monitoring. Self-paced instructors who use CBI report a need for IST in individualized instruction. Non-CBI instructors would apparently like to receive some IST in CBI. The extent of the need is not clear.

### RECOMMENDATIONS

1. Provide IST for all instructors in the following functions (see table C-1).
  - . Presentation/Delivery of Instruction
  - . Academic Counseling and Monitoring
  - . Curriculum Development
2. Provide group-paced instructors IST in the following:
  - . Preparation of External Matters
3. Provide self-paced with CBI instructors IST in Individualized Instruction.

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**SPECIFIC RESULTS, CONCLUSIONS AND RECOMMENDATIONS**

**PART D: CISO PERSONNEL**

## FUNCTIONS

Table D-1 presents the major groups of functions that CISO personnel perform at training activities. The names of the function groups, appearing in capital letters, were chosen by TAEG as descriptive of the majority of the specific functions falling within a grouping. For IST development, the major function group names could be viewed as topics, the specific functions as subtopics.

Based on analyses of the frequency of performing major functions, education specialists, CIS officers and enlisted personnel have somewhat different jobs. Training specialists and enlisted personnel function in quite similar ways. Table D-2 shows rank orders for frequency of performance for the different subgroups of CISO personnel. It also shows rank orders for difficulty and importance of performance and for the perceived usefulness of inservice training. In table D-2, a "1" indicates "most" and a "4" indicates "least." Thus, for education specialists, preliminary course development functions are performed most often. Secondary course development and service to activity functions are tied as least often performed. For CIS officers, the most difficult functions to perform are under service to activity. Evaluation functions are considered by CIS officers to be most important for success on their job, and evaluation is the area where inservice training would be most useful.

TABLE D-1. COMPONENTS OF THE MAJOR FUNCTION GROUPS FOR CISO PERSONNEL

PRELIMINARY COURSE DEVELOPMENT

1. Analyze job/new requirements  
Select tasks to be trained  
Select job performance measures  
Analyze existing courses/modules  
Select instructional setting
2. Develop learning objectives  
Develop test items to measure objectives  
Describe entry level behavior  
Establish sequence of objectives  
Specify learning events/activities

SECONDARY COURSE DEVELOPMENT

1. Specify instruction management plan and media  
Select existing materials  
Develop instruction  
Validate instruction
2. Assist with student testing

EVALUATION

1. Study attrition and setbacks  
Design instruments for internal evaluation  
Collect data for internal evaluation  
Analyze data from internal evaluation  
Make recommendations based on internal evaluation
2. Assist with preparation of items for external evaluation  
Assist with interpretation of results of external evaluation

SERVICE TO ACTIVITY

1. Design interdepartmental inservice programs  
Conduct interdepartmental inservice programs  
Assist with intradepartmental inservice programs
2. Coordinate with external activities and agencies concerned with training quality assurance  
Coordinate accreditation requirements and review  
Advise commanding officer on CISO civilian affairs



TABLE D-2. RANK ORDERS OF FUNCTIONS BY PERSONNEL TYPE FOR CISO PERSONNEL

	Personnel Type											
	Education Specialists				Enlisted Personnel				Officers			
	F	D	I	U	F	D	I	U	F	D	I	U
Preliminary Development	1	2	4	4	3	3	3	3	2	2	3	3
Secondary Development	3.5	3.5	3	3	1.5	1.5	1.5	1.5	4	3	2	2
Evaluation	2	3.5	1	1	1.5	1.5	1.5	1.5	1	4	1	1
Service to Activity	3.5	1	2	2	4	4	4	4	3	1	4	4

Key to columns:

F = Frequency of Performance  
D = Difficulty of Performance  
I = Importance of Performance  
U = Usefulness of IST

"1" indicates most  
"4" indicates least

### INSERVICE TRAINING PRIORITIES

Priorities for IST were established by applying an algorithm to the F, D, I, U rank orders. These priorities are shown in table D-3. A "1" indicates the highest priority, a "4" the lowest priority.

TABLE D-3. OVERALL PRIORITY OF FUNCTIONS FOR  
INSERVICE TRAINING FOR CISO PERSONNEL

Function <sup>1</sup>	Type of Personnel		
	Education Specialist	Officer	Enlisted
Preliminary Development	3	4	3
Secondary Development	4	2	1
Evaluation	1	1	2
Service to Activity	2	3	4

<sup>1</sup>See table D-1 for descriptions of the major function areas.

Note: In the cells, a "1" indicates the highest priority; a "4" indicates the lowest priority.

### CONCLUSIONS

There are different types of CISO personnel who in most cases have differing priorities for inservice training. These priority differences reflect the differing natures of their jobs. All CISO personnel should have inservice training in evaluation functions. Officers need inservice training primarily in evaluation, but should also have an introduction to the other functions. Education specialists need IST in the service to activity functions. Enlisted personnel and training specialists need IST most in secondary development functions.

### RECOMMENDATIONS

The recommendations presented below are based on the assumption that the personnel involved will continue to perform functions reported as typical for their classification. There may be local exceptions. If, for example, there is no civilian education specialist at an activity, then it is likely that an officer or senior enlisted person will assume those functions that would normally be delegated to the education specialist. In this case, the officer or enlisted person should receive IST as if he or she were an education specialist and, depending on background, may require special training in curriculum development and other typical education specialist functions.

The following recommendations are also offered:

1. Give all CISO personnel, as they arrive, a general introductory level orientation to all the functions that CISOs perform. If changes occur in the functions or requirements, through changes in policy, instructions, or workload, then give additional introductory level inservice that reflects those changes.

2. Evaluation functions (table D-1) provide IST for all CISO personnel. This is likely to be a continuing requirement. All CISO personnel should know how to evaluate a training program, including the strengths and weaknesses inherent in such evaluations. They should also know how external evaluation is conducted for the NAVEDTRACOM and how that information can be used to improve training.

3. Provide education specialists with IST in Service to Activity Functions (table D-1).

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4. Provide enlisted CISO personnel with IST in Secondary Development functions.

5. IST for CIS officers beyond the general introduction and evaluation training is not generally recommended.

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1. Ford, L. H. and Hall, E. R. Inservice Training Needs of Training Executives and Curriculum and Instruction Standards Office Personnel. TAEG Technical Report 144, May 1983. Training Analysis and Evaluation Group, Orlando, FL 32813.
2. Ford, L. H., Whitten, T. C., and Hall, E. R. Inservice Training Needs of Instructors and Training Managers. TAEG Technical Report 145, May 1983. Training Analysis and Evaluation Group, Orlando, FL 32813.

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